



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,421	05/10/2005	Martin Schober	66376-351-7	7973
25269	7590	04/30/2007	EXAMINER	
DYKEMA GOSSETT PLLC FRANKLIN SQUARE, THIRD FLOOR WEST 1300 I STREET, NW WASHINGTON, DC 20005			NGUYEN, NINH H	
			ART UNIT	PAPER NUMBER
			3745	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/531,421	SCHOBER ET AL.	
	Examiner	Art Unit	
	Ninh H. Nguyen	3745	

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 February 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 17-19 and 22-32 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 3,17-19 and 22-30 is/are rejected.
 7) Claim(s) 31 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 15 April 2005 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the Request for Continued Examination dated 03 January 2007.

Response to Arguments

1. Applicant's arguments with respect to claims 17-19, and 22-32 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

1. Claim 17 is objected to because of the following informalities: on line 11, "said" should be replaced with --an-- to avoid indefiniteness. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 17, which claim 18 depends on, recites the blades being integrally joined with the cover disk. In contrast, claim 18 recites the

blades are free from coverings. A person in the art does not know how to make the blades that are both covered by the cover disk and at the same time are free from coverings.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 17-22, 26, 28-30, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Parisi et al. (6,224,335).

Parisi discloses an impeller (Figs. 1-4) comprising a hub 12, a cover disk 22 which is disposed on an intake side of the impeller and is provided with a central opening for sucking in a conveyed medium, and a plurality of blades 18 which are joined integrally with the cover disk and are provided with an inner section located in the region of the central opening and an outer section located in the region of the cover disk (Fig. 2), the impeller being provided with a completely open configuration on a pressure side of the impeller opposite the cover disk (Fig. 2) and the blades are shaped at least in the inner section with a three-dimensional curvature (the blades curved in both axial and radial direction in Fig. 2) and in the outer section with a substantially two-dimensional curvature (Fig. 1), wherein the axial projection (shown at 24 in Fig. 1) is provided on the cover disk in the region of the central opening, which projection

Art Unit: 3745

projects in the direction of the intake side, and wherein one blade on the intake side is substantially flush with a front edge of the axial projection (Fig. 1);
wherein the blades are free from undercuts (Fig. 2);
wherein the blades are curved in a two-dimensional manner in the region of the cover disk and are perpendicular to the plane of the cover disk (Fig. 1);
wherein the cover disk is round off in the region of the central opening (Fig. 2);
wherein the blades are provided at least in the outer section on the pressure side with a face surface which is situated in a plane perpendicular to the axis of the impeller (Fig. 1);
wherein the blades have in the outer section a substantially rectangular cross section (Fig. 1);
wherein the diameter of the opening of the cover disk corresponds to 30% to 70% of the diameter of the impeller (judging from Fig. 1).

Regarding claim 32, Parisi discloses a housing wall (perpendicular to the wall 38 in Fig. 1) to which a face side of the blades is adjacent.

4. Claims 17, 18, 22, 24, 25, 28-30, and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Chapman (6,775,615).

Chapman discloses an impeller (Figs. 1-11) comprising a hub 11, a cover disk 13 which is disposed on an intake side of the impeller and is provided with a central opening for sucking in a conveyed medium, and a plurality of blades 12 which are joined integrally with the cover disk and are provided with an inner section located in the region of the central opening and an outer

section located in the region of the cover disk (Fig. 1), the impeller being provided with a completely open configuration on a pressure side of the impeller opposite the cover disk (Fig. 1) and the blades are shaped at least in the inner section with a three-dimensional curvature (the blades curved in both axial and radial direction in Fig. 3) and in the outer section with a substantially two-dimensional curvature (Fig. 1), wherein an axial projection is provided on the cover disk in the region of the central opening(Fig. 1), which projection projects in the direction of the intake side, and wherein one blade on the intake side is substantially flush with a front edge of the axial projection (Fig. 1);

wherein the blades are free from undercuts (Fig. 1);

wherein the cover disk is round off in the region of the central opening (Fig. 1);

wherein the blades are provided at least in the outer section on the pressure side with a face surface which is situated in a plane perpendicular to the axis of the impeller (Fig. 4);

wherein the blades have in the outer section a substantially rectangular cross section (Fig. 1);

wherein the diameter of the opening of the cover disk corresponds to 30% to 70% of the diameter of the impeller (judging from Fig. 1);

wherein the blades have a convex surface which converges smoothly from the inner section to the outer section (Fig. 3);

wherein the blades have a concave surface which converges smoothly from the inner section to the outer section (Fig. 3);

Regarding claim 32, Chapman discloses a housing wall (shown at 65 in Fig. 6) to which a face side of the blades is adjacent.

Claim Rejections - 35 USC § 103

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parisi et al. Parisi discloses all the limitations except the blades in the outer section does not have at least partly trapezoidal cross section as claimed.

Since the applicant has not disclosed that having blades in the outer section having at least partly trapezoidal cross section solves any stated problem or is for any particular purpose above the fact that a blade usually has a cross section, and it appears that the blades of Parisi would perform equally well with the shape as defined and claimed by applicant, it would have been an obvious matter of design choice to modify the cross section of the blade of Parisi by utilizing the specific shape as claimed.

Allowable Subject Matter

6. Claim 31 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ninh Nguyen whose telephone number is (571) 272-4823. The examiner can be normally reached on Monday-Friday from 7:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached at (571) 272-4820. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, please go to <http://pair-direct.uspto.gov> or contact the Electronic Business center (EBC) at 866-217-9197 (toll-free).



NINH H. NGUYEN
PRIMARY EXAMINER

Nhn
April 23, 2007